

What is claimed is:

1. A peptide compound, comprising about ten to about 50 amino acids in a sequence, wherein the sequence comprises the integrin binding motif and is further characterized by a biological activity which enhances bone growth, wherein the amino acid may be in the D- or L- conformation.
2. The peptide of claim 1, wherein the integrin binding motif is RGD sequence.
3. The peptide of claim 1, wherein the amino acid sequence is contiguous with the RGD sequence in naturally occurring protein matrix extracellular phosphoglycoprotein.
4. The peptide of claim 1, comprising from about 15 to about 35 amino acids.
5. The peptide of claim 1, wherein the amino acids are in the L-conformation.
6. The peptide compound of claim 1, wherein the peptide is selected from the group consisting of:

AQKSPVSKSKSTHRIQHNIDYLKHL SKVKKIPSDFEGSGYTDLQERGD

**RGDAQKSPVSKSKSTHRIQHNIDYLKHL SKVKKIPSDFEGSGYTDLQE**

DSQAQKSPVSKSKSTHRIQHNIDYLKHL SKVKKIPSDFEGSGYTDLQDRGD

**RGDSPVSKSKSTHRIQHNIDYLKHL SKVKKIPSDFEGSGYTDLQE**

DSQAQKSPVSKSKSTHRIQHNIDYLKHL SKVKKIPSDFEGSGRGD

**RGDTMRIQHNIDYLKHL SKVKKIPSDFEGSGYTDLQE**

DSQAQKSPVSKSKSTHRIQHNIDYLKHL SKVKKIPSDFERGD

**RGDLKHL SKVKKIPSDFEGSGYTDLQE**

DSQAQKSPVSKSKSTHRIQHNIDYLKHL SKVKKIPSRGD

**RGDL SKVKKIPSDFEGSGYTDLQE**

DSQAQKSPVSKSKSTHRIQHNIDYLKHL SKRGD

**RGDVKKIPSDFEGSGYTDLQE**

DSQAQKSPVSKSKSTHRIQHNIDYLKRGD

**RGDIIPSDFEGSGYTDLQE**

**DSQAQKSPVSKSTHRIQHNIDRGD**  
**RGDDFEGSGYTDLQE**  
**DSQAQKSPVSKSTHRRGD**  
**RGDGSGYTDLQE**  
**DSQAQKSPVKRGD**  
**RGDGYTDLQE**  
**DSQAQKSRGD**  
**RGDNDISPFSGDGQPFKDIPGKGEATGPDLEGKDIQTGFA**

NDI **RGDSPFSGDGQPFKDIPGKGEATGPDLEGKDIQTGFA**  
NDISPF **RGDSGDGQPFKDIPGKGEATGPDLEGKDI**  
NDISPFSGD **RGDGQPFKDIPGKGEATGPDLEGKDI**  
FSGDGQPFKDIPGKGEATGPDLEGKDIQTGFAGPSEAES **RGDTHL**  
IPGKGEATGPDLEGKDIQTGFAGPSE **RGDAESTHL**  
EATGPDLEGKDIQTGFAG **RGDPSEAESTHL**  
NDISPFSGDGQPFKD **RGDIPGKGEATGPDLEGK**  
GKGEATGPDLEGKDI **RGDQTGFAGPSEAESTHL**  
FSGDGQPFKDIPGKGEATG **RGDPDLEGKDIQTGFAGPSEA**  
DGQPFKDIPGKGEATG **RGDPDLEGKDIQTGF**  
PFKDIPGKGEATG **RGDPDLEGKDIQ**  
DIPGKGEATG **RGDPDLEGKDIQTGFAGP**  
DGQPFKDIPGKGEATG **RGDPDLEGKDIQTGF**  
GKGEATG **RGDPDLEGKDIQTGFAGPSEA**  
EATG **RGDPDLEGKDIQTGF**  
EATG **RGDPDLEGK**  
EATG **RGDPDPL**

7. The peptide of claim 1, comprising the sequence  
**TDLQERGDNDISPFSGDGQPFKD**

8. A peptide characterized by:
  - (a) ten to fifty amino acids;
  - (b) an RGD sequence;
  - (c) amino acids substantially the same as those contiguous with an RGD sequence of naturally occurring matrix extracellular phosphoglycoprotein; and
  - (d) biological active in promoting bone growth.

9. The peptide of claim 8, wherein the peptide is selected from the group consisting of

**DFEGSGYTDLQERGD**  
**YTDLQERGDNDISPF**  
**ERGDNDISPFSGDGQ**  
**TDLQERGDNDISPFSGDGQPKD**

10. An antibody which binds specifically to a peptide of claim 8.

11. An antibody which binds specifically to a peptide of claim 9.

12. A formulation comprising:  
a carrier; and  
a therapeutically effective amount of a peptide of claim 8.

13. The formulation of claim 12, wherein the carrier is a saline solution and the formulation is injectable.

14. The formulation of claim 12, wherein the carrier is a paste and the formulation is a toothpaste.

15. The formulation of claim 12, wherein the carrier is an aqueous flavored solution and the formulation is a mouthwash.

16. A pharmaceutical formulation, comprising:  
a pharmaceutically acceptable carrier; and  
a therapeutically effective amount of a peptide comprising from ten to fifty amino acids which amino acids correspond to an amino acid sequence of naturally occurring protein matrix extracellular phosphoglycoprotein and comprising the RGD sequence of phosphoglycoprotein, the peptide further characterized by enhancing bone growth in a mammal.